NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial x Annual ____ Special ____ Date of Test 5-7-58

Company Humble Oil & Refining Lease J. L. Greenwood Well No. 5

Unit I Sec. 9 Twp. 22-S Rge. 37-E Purchaser El Paso Natural Gas Co.

Casing 7 Wt. 24.0 I.D. 6.336 Set at 3630 Perf. 3453 To 3516

Tubing 2-1/2 Wt. 6.5 I.D. 2.441 Set at 3416 Perf. - To -

Gas Pay: From 3453 To 3516 L 3416 xG 0.695 -GL 2774 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing x Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 4-16-58 Packer 3416 Reservoir Temp. ____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps -

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						527	80			72
1.	2	1.250	28		64	496				3
2.	2	1.250	36		70	472				3
3.	2	1.250	67		56	363				3
4.	2	1.250	84		57	264				3
5.	No 24 hr. point									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	35.674		33.2	0.9777	0.9282	1.051	1131
2.	35.674		48.2	0.9905	0.9282	1.055	1704
3.	35.674		80.2	1.0019	0.9282	1.046	2786
4.	35.674		97.2	1.0069	0.9282	1.032	3335
5.	Unable to secure 24 hour point due to location being too near residence.						

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 5.866 $(1-e^{-s})$ 0.151

Specific Gravity Separator Gas .695
Specific Gravity Flowing Fluid ____
P_c 540.2 P_c^2 291.82
*0.695 Assumed

No.	P_w / P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	509.2	259.3	6.63	43.96	6.634	265.94	25.9	515.7	.96
2.	485.2	235.4	10.00	100.00	15.100	250.50	41.3	508.5	.93
3.	376.2	141.5	16.34	267.00	40.317	181.82	110.0	425.6	.79
4.	277.2	76.8	19.56	382.59	57.772	134.57	157.2	344.9	.64
5.									

Absolute Potential: 4510 MCFPD; n .51
COMPANY Humble Oil & Refining Company
ADDRESS Box 2347, Hobbs, New Mexico
AGENT and TITLE R. A. Gordon District Superintendent
WITNESSED L. D. Southern
COMPANY El Paso Natural Gas Co.

REMARKS

JEW/mcb Orig & 1 cc: O. C. C., Santa Fe, N. M.
cc: Mr. W. E. Hubbard
Gas Division, Houston
Mr. R. R. McCarty, Midland
Mr. H. L. Henaley, Midland

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.